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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,617	02/05/2007	Thomas Bork Hardahl	742111-174	8471

25570 7590 10/06/2009
ROBERTS MLOTKOWSKI SAFRAN & COLE, P.C.
Intellectual Property Department
P.O. Box 10064
MCLEAN, VA 22102-8064

EXAMINER

DIETRICH, JOSEPH M

ART UNIT	PAPER NUMBER
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3762

NOTIFICATION DATE	DELIVERY MODE
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10/06/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/596,617	Applicant(s) HARDAHL ET AL.	
	Examiner Joseph M. Dietrich	Art Unit 3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/19/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 – 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “which system has input means connected to an ECG source.” The ECG source is inferentially included. Thus, it is unclear whether it is being positively or functionally recited. It is suggested to first positively recite the ECG source before explaining how it is used.

Claim 1 recites “where the result of the analysis is represented as a point in at least one coordinate system.” The coordinate system is inferentially included. It is also unclear if the coordinate system is found on a display or if the result and the coordinate system are merely stored in the system.

Claim 1 recites “where the system compares the actual coordinates in the coordinate system...” This renders the claim unclear because a method step is actively recited in an apparatus claim. It is suggested to use functional language, such as “the system is capable of comparing.”

Claim 1 recites “for indicating symptoms or disease having influence on the ECG curvature” in lines 9 – 10. It is unclear if this is describing the comparison between the actual coordinates and the reference parameters, or merely the reference parameters.

Claim 1 recites "where the system analyses the QT curvature for the ECG for indicating hereditary or acquired Long QT syndrome." This renders the claim unclear because a method step is actively recited in an apparatus claim. It is suggested to use functional language, such as "the system is capable of analyzing."

Claim 2 recites "the system is analyzing ECG curvature for Long QT Syndrome acquired by drug influence." This renders the claim unclear because a method step is actively recited in an apparatus claim. It is suggested to use functional language, such as "the system is capable of analyzing."

Claim 3 recites "in that the analyzing process is repeated in the system for further selected parameters..." This renders the claim unclear because a method step is actively recited in an apparatus claim. It is suggested to use functional language, such as "the system is capable of repeating the analyzing."

Claim 4 recites "the group of symmetry comprises at least the following parameters: Symmetry evaluated from Tstart to Tend; Symmetry with Tpeak as mean evaluated from Tstart to Tend; Symmetry with Tpeak as mean evaluated in a symmetric interval of 10% of the Tstart-Tend-interval surrounding Tpeak; Symmetry with Tpeak as mean evaluated in a symmetric interval of 20% of the Tstart-Tend-interval surrounding Tpeak..." It is unclear how all the parameters would be true at the same time, for example Tpeak as mean evaluated in a symmetric interval of both 10% and 20% of the Tstart-Tend-interval. Examiner believes that claim 4 should read, "the group of symmetry comprises at least one of the following parameters..." Similarly, **claims 5 - 7** recite a plurality of parameters. Examiner believes the claims should read, the group of

flatness/duration/complexity comprises at least one of the following parameters. The claims have been examined accordingly.

Claim 8 recites “the system is selecting and combining parameters from different groups.” This renders the claim unclear because a method step is actively recited in an apparatus claim. It is suggested to use functional language, such as “the system is capable of selecting and combining parameters from different groups.”

Claim 11 recites “representing the result of the mathematical analysis as a point in at least one coordinate system.” It is unclear if the coordinate system is found on a display or if the result and the coordinate system are merely stored in the system.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Shusterman (US PG PUB 2002/0143263).

Regarding **claims 1 – 13**, Shusterman discloses a system and method, comprising receiving ECG curvature from a source (e.g. paragraph 37); indicating a number of different parameters contained in the received ECG curvature (e.g. paragraph 54); storing the parameters in storage means (e.g. paragraph 54); selecting disease specific parameters in the storage means (e.g. paragraph 54); selecting

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parameters from at least three groups, which groups comprises parameters of symmetry, flatness, duration and/or complexity (e.g. paragraph 67); combining selected parameters in mathematical analyzing means (e.g. paragraph 55); representing the result of the mathematical analysis as a point in at least one coordinate system, which coordinate system comprises at least one axis (e.g. Fig. 14); comparing the actual placement in the coordinate system with a number of reference parameters stored in a memory (e.g. paragraph 55); and analyzing the QT curvature of the ECG for indicating drug induced changes (e.g. paragraph 55).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph M. Dietrich whose telephone number is (571)270-1895. The examiner can normally be reached on M-F, 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. M. D./
Examiner, Art Unit 3762
9/30/09

/George R Evanisko/
Primary Examiner, Art Unit 3762